

Hawaii

Australia

New Zealand

H. S. Ladd

CE

BERNICE P. BISHOP MUSEUM

HONOLULU, HAWAII

FIELD NOTE BOOK

305 sp.
 Kure Bay, collecting Dec. 1, 1925
 On fringing reef, exclusive of shore, rocky beach
 to coral - all appear to be same sp.
 (with no effort to collect coral)
 3 spec. - all appear to be same sp.
 { 3 gast. - same sp.
 1
 1

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Subject Geology

Locality: Hawaiian Ids., Australia (p. 30),
New Zealand, p. 31

Member of Staff A. S. Ladd

Date Nov-Dec 1925

Shore gastropods

limpets - large - 2

" small - 13

limpet ? - 1

black small 16

" mottled 11

speckled 7

plotted very small 5

dark medium 20

(H. crab) small white 1

7

2

1

cowrie speckled 1

" mottled 1

green cowd 2

- all above except 2 large limpets placed in
tall bottle without
water

Worms - 30± species

Hanalei Bay Collecting Dec. 1, 1925

On fringing reef - exclusive of shore-rocks beach

6 coral - white all different
(note no special effort to collect coral)

3 cones - all appear to be same sp.

3 gast. - same sp
1
1

Black large number of old shells indicated
by hermit crabs - ~~the~~ black sp. with orange bands
on legs.

above Placed in pt. of jar - 3 corals & shells
also hermit crabs

Note - Canoe box contains sp. from
Haleiwa collected Nov. 29 (Sun)
H.S. Ladd

Left with Palmer
all cores collected
at Waitiki - Dec 1925

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Date Nov-Dec 1925

Itinerary (see also I.S.S. Notebook). ~ Oahu Nov. 25 - Dec. 23 ~ Oahu 1925.

Nov. 25. Arr. - Misc. - short field trip.
 26. Thanksgiving - Sightseeing.
 27. Office
 28. Field - around Is.
 29. Field - Koko head
 30. Office

20 Field & vacation
 21 Office & Fish Work
 22 Vacation and preparation to leave.
 23 " " " " " "
 24 Preparations to leave - sailed 7⁰⁰ P.M.

Dec. 1. Kaimukona Bay - Reef work.
 2. Fish Work
 3. Fish work
 4. Office 1/2 day
 5. Field - near Alaia Pt.
 6. Office & fish work
 7. Office
 8. Office
 9. Office & Fish work
 10. Fish work
 11. Field - Dr. Cooke in A.M.
 12. Fish work and Field - Ewa coal plain
 13. Field - Waikiki reef and office
 14. Vacation - married
 15. " , passports, etc.
 16. " , office.
 17. " , passports, etc.
 18. " " "
 19. " " "

Totals:
 1) Days in field ----- 6 1/2
 2) " " office ----- 7 1/2
 3) " on fish work ----- 5
 4) " sightseeing and vacation -- 1 1/2
 and preparations to leave. 3 0

Days in Honolulu ----- 30

Nov. 25.
Short field trip - see I.H.S. notebook 91-92.

Nov. 28. Auto Trip around Island - all day trip.

Started out in Palmeri cove. Followed road leading up Nuanana Valley - long grade to Nuanana Pali. (2 pictures here). The road here passes through a deep notch in the Koolau Range. The power of the wind blowing through the notch is very great. It frequently takes off the tops of touring cars. A steel cable along the cliff enables pedestrians to hold on!

From the road immediately beyond the crest of the divide one obtains a wonderful view of the ocean and the land intervening between the Koolau Range and the shore, also the cliffs to the NW. Dike cut the basalt at a number of places along the road.

The road in this section is nearly paved - an excellent road. Many joints - look finally land one at the base of the pali. Here a new road (not shown on U.S. & S. topog.) leads toward Waimanalo. Much of the low land here is covered with sugar cane. Crossing in Waimanalo we took the old road back to the base of the Pali.

Rabbit Id (Manana Id) was seen. It lies north of Makapuu Head which forms the eastern tip of Oahu. Rabbit Id appears as a semi-circular crater with its highest point to lee of prevailing trade winds. It is an ash crater & most of the ejecta were carried to the SW by the NE trades. This is generally true of all the ash craters on Oahu.

Returning to the base of the Pali the fluted basalt cliffs of the S.E. part of the Koolau Range are well shown. Palmer believes these steep fluted cliffs are due to the constant rainfall in small joints - possibly enlarging master joints in the basalt. Same thing seen on a small scale on other side of island.

Picture of hatchet-headed mt (Puu Loa or one near it - see Palmer). Though deeply laterized cuts. Soil brilliant red or brown in color due to various oxides of iron.

Palmer does not think much of Davis' recently published opinion that the Koolau range is part of an enormous crater whose other side (if it ever existed) lies beneath the sea. Wonder what soundings show. It is highest to leeward all right.

Along main road following shore line (see Hawaii Tourist Bureau map) to Kowale Bay on the west side of the northern tip of the island. We ate lunch and examined Lithothamnion reef. These algae appear as rough concentric masses of ls. a foot \pm across. Corals comparatively rare. Minute gastropods abundant but collecting on the whole is very poor. The tide is only about one foot or so & this is probably the explanation. Bivalves collected from shell heap. Calc. sand is light brown in color & contains many shell fragments. The eustatic bench is well shown - it seems to indicate a lowering of sea level of about 15' in recent geologic past. W. & P. believe present ice cap area much less extensive recently.

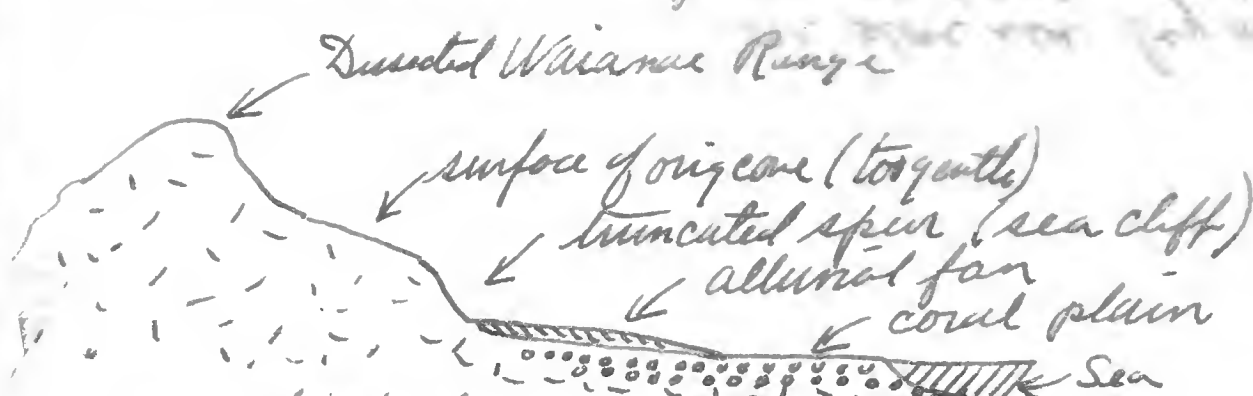
Lithified sand dunes observed at several points along northern coast.

On around to Waialua & visited cane plantation. Saw loading of cane.

Picked up McLean (one of Palmer's students) & cut across island to Pearl Harbor. This drive was across a youthful upland - great fine apple country. Some of the water comes through a tunnel over 1000' long through Koolau Range.

Some interesting geologic & physiographic features may be seen by looking from the Waialua Plantation toward the Waianae Range. At least 7 different kinds of surface

may be seen - as follows:



1. Dissected hills of Waianae Range
2. Remnants of old cone (between young valleys)
3. Young valleys
4. Sea cliffs at spur ends
5. Alluvial fan from mouth of young valley
6. Arroyo cut in center of fan
7. Coral flat - to shore.

Beautifully developed spheroidal weathering in basalt seen near Waiakalua Gulch. Rock deeply weathered - all stages observable. Where only a few spheres remain in red-yellow-brown matrix the rock has the appearance of conglomerate or agglomerate.

Canters left by tree trunks seen along road at Red Hill, Koolau. Two pictures here - later in P.M.

Stopped at pumping sta. Saw Pearl Harbor, etc. - on to Honolulu.

Nov. 29. Koko Head Trip with Palmer class.

Drove east from Honolulu along Mānana Bay beyond Kūpa Pond. Left cars here & ascended ridge turning east at top and following secondary road (see U.S.G.S. map). At a point at the head of Mānana Bay (on ridge) we stopped to collect small quartzite ls. $\frac{1}{2}$ " \pm in length. The rock here is ash & badly weathered. In the loose stuff in the depression between the overlapping beds the ls. are very abundant (see spec.).

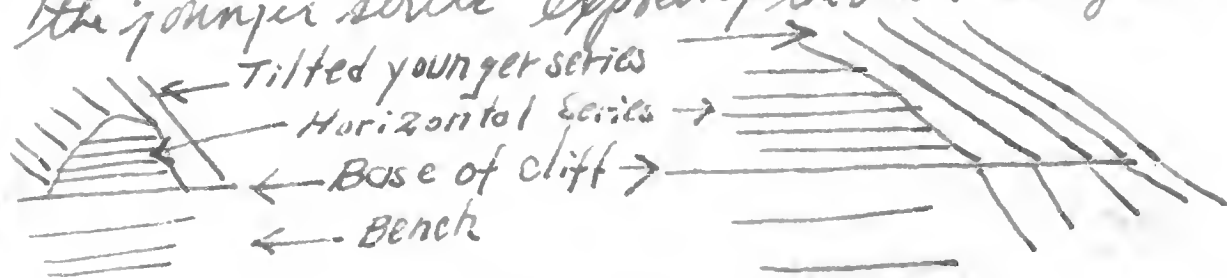
Before descending to the shore at the head of the bay we observed a lava flow - brown

porous, rough material. This is one of the "14 points":

Along a line drawn almost straight from Rabbit Is. on the NE to through Koko Crater to Koko Head on the SW. calcamine is known to have broken out in at least 14 places. A number of these were seen & several closely examined during the course of the day. Koko Head, Koko Crater, Rabbit Is. and a small unnamed crater (appearing as a hill on the USGS map) between the last 2 and largest.

Beautiful view of undulating reef in Hanalei Bay seen from above (picture). Descended to water's edge - saw banded ash & lava flow at head of bay. Occasional large fragments of igneous rock & coral are found in ash. These were evidently blown from the walls of the conduit during the eruption. In many places they struck with such force as to depress the bedding planes noticeably.

Continuing along the shore a beautiful unconformity is seen between two series of ash beds on the NE side of the bay. A knife edge contact separates the older horizontal beds from the younger tilted beds. If the older ones were tilted it would look "just like the pictures in the text books". The escarpment bench is well developed here and the unconformity can be seen both in the vertical sea cliff and in the horizontal spar cut terrace. Small "valleys" cut in the horizontal series are seen filled with rocks of the younger series. Rather in "windows" are cut through the younger series exposing the older horizontal beds.



Followed along bench above sea beyond Koko Crater. Stopped above bay (immediately S. of blowhole)

to eat lunch. An arid district with fantastic wind erosion. Blow hole caused by undermining of soft bed & breaking through above. Small water force out air & spray - big waves cause spout of water. At one such point erosion has forced up erosion of hole & much effectiveness is lost.

Fauna observed. 1) numerous echinoids of at least 3 types or species (a) flat spined purple, (b) round spined purple (c) round spined green. These make deep pits in rocks and seem to be an active and important agent in rock destruction. The only molluscs observed were some 9 or 10 sp of gastropods (1 large limpet, 2 Cypraea, 2 Murex-like small sp, etc. see spec.). See ammonites rare. Coral frags abundant. The fauna in the strong surf must be rich. A poor coast compared to Fiji, etc. but better than that seen yesterday.

On to small crater previously mentioned. It is very perfect in shape - about 1000' across & some 30' deep (i.e. below lowest point of rim). Composed chiefly of basaltic lava (containing some olivine). - very porous & very rough. At one point pseudo-glacial striae were observed. These were due to hard fragment passing over cooling but still plastic lava. A small amount of ash on the leeward side may represent last spasm of small crater (Palmer) or may have come from Koko Crater (CKW).

The journey from shore to small crater was made by ascending first a gently sloping alluvial fan & then the rough air surface of a lava flow.

From this crater a good view of Koko Crater could be had - looking into it from the low windward rim also by looking in the opposite direction (NE) another of the "14 points" could be seen - a hump of lava with a "trace" of a central depression or crater.

On both of the above trips much beautiful and unusual vegetation was seen. The light green patches of the cucurbit? trees stand out among the darker green of the other vegetation giving what McCoy has called "tapestry vegetation" - a clever descriptive term.

Dec. 2.

First real reef work. To Koko Head region with Palmer & Stone. They left me at Manana Bay about 9:30 - worked there until 2:30 P.M. One can wade out on reef to its outer edge. The bay is only partly filled with coral - in between the more or less continuous patches are deeper sandy pools of various size. There seems to be very little growing coral. Had no glass-bottomed box & hence did not collect as much as I might have otherwise. Conus, Cypraea, etc. not common on reef. Quite a series of shore gastropods (mostly small). No pelagic pods. Total of over 20 sp. gastropods and half a dozen corals.

Dec. 6.

With Palmer & Stone to latter's country place near Alulu Pt. (somewhat less than 1 mile NW of Pt.). Tramped about in morning & collected few things from raised reef (about 5-10' above high tide). Material well preserved & abundant. A lot of similar stuff from road material nearby. In some some of original color is retained. Saw much lithified dune sand, weathered basalt, etc.

Palmer believes that the vents from which the lavas (that now make up most of Koolah Range) came lie some distance north & east of present cliff. This formed an enormous dome (not a crater) part of which foundered later leaving present remnant. It then is a fault scarp which has been eroded to look some distance.

The depression now occupied by Kaelepulu Pond is a drowned valley. The low scarp N.W. of the pond may be (probably is) a sea cut cliff or a river cut cliff. The rock is lithified dune sand - shows much undercutting forming caves. No elevated reef seen except along shore.

Dec. 12.

Field trip in morning with Dr. Cooke. Drove in his car up Manoa Valley & to point near top of Tantalus - hence to summit & around rim of this old crater. No rock is exposed - still overgrown with vegetation - much grass & low underbrush, some trees - among them patches of native forest. This area is now a forest reserve and much planting is being done. Some years ago a shallow lake existed in the crater - now dry.

The purpose of the field trip was to introduce me to the methods of collecting land shells so that I may do this work successfully in Fiji. Shells were found in some abundance under various conditions. In general one should search in protected places - i.e. protected from sun & rain. The tree or arboreal species are found on the underside of the leaves, especially where leaves are thick & clustered. The under side of limbs & the bases of trunks are also good places - loose bark, cracks, & rubbish at foot of trunk. In low brush one must get down & look up - turn back leaves of various plants (especially thick broad ones), some ferns good - also look for petioles of leaves - where leaves join stems. Stones should be turned over. - Trees & other loose stuff near gardens give good results.

It takes a practiced eye to pick out these shells & Dr. Cooke did most of the collecting - though I improved after the first few minutes.

Land Snails in general are common in the tropics & not restricted to wet places as I had supposed. Many species are very restricted in their distribution. Most "species" have numerous varieties or "geographical races" that are exceedingly restricted - each one being characteristic of one hillside or even one tree (colony). For example a given species may be distinct on one side of a gulch & similar on the

other! Certain shell form (i.e. proportions of length to breadth, etc) are very characteristic of limited areas. "Color forms" of a given species may be mapped! These last are evidently rapidly-running mutations - offspring of a single individual for their shells are hemispherical & fragrant most of the time.

The many facts known about the distribution of land shells seem to show that they spread with exceeding slowness for it seems that many closely adjacent colonies have remained isolated by simple barriers long enough to develop definite characters - in many cases of specific importance.

The distribution of these various "geographic races" on a single island ties up with the distribution of genera on different islands. Thus in the Hawaiian group where the shells are fairly well known Dr. Cooke believes he can work out the sequence of separation of the different islands rather accurately - assuming that they were once connected - a belief that most scientists (at least most geologists!) do not hold.

Dr. Cooke does not believe in the "drift theory" nor any other of the same class. He believes in land connections & states some remarkable evidence of distribution to back up his belief.

It is a pity that no one has succeeded as yet in raising land shells in the laboratory because such studies should throw valuable light on their migratory power, rate of mutation, etc. It seems a strange fact that certain species have migrated all over the Pacific within the time of man.

Preparation -

Drown in water 12+ hours - then pull snails in extended condition. Place

in 40% alcohol for at least several hours. Cham. - (pull large ones, squirt small ones.)

Equipment

1 gross nails - 3 sizes { $\frac{1}{2}$ gross 2 dram.
bal. 144 " $\frac{1}{4}$ "
(see boxes)

See Cooke. ✓ alcohol. (Ball's kit)
✓ labels.

Cook advises emersion in 50% alcohol after drowning. When shipping dry on off alcohol & wrap label around bottle - pack well.

Sun Dec. 13.

With Palmer in afternoon to Ewa coral plain. Drove to Bot. Mag. Sta., parked car and walked toward the sea over rough but level coral plain.

Dead shells of thousands of land snails cover the ground so that a handful of the loose stuff reminds one of the deep. faun. at least as far as numbers are concerned. A few living specimens are to be found around the trunks of low trees but the land snails practically disappear when the bulk of the vegetation was cut off. This was done fairly recently to grow sugar (? ip) & some plants still remain.

The coral rock itself is gray tough fls. - white on fresh surface. Fossils are not abundant except locally. Upon finding good blocks we sat down & cracked rock. Quite a fauna resulted. A *Typhina* is most abundant species (see operculum). Corals, cyprinae, canals, etc. also found. Crushing & washing blocks would give good results - some rock collected for this purpose.

Dec. 14 - Mon.

To Edmondson's lab. at Waikiki. Collected on fringing reef with Dr. Edmondson & Mr. Ostergaard. Used a glass bottomed

box for the first time - will never go out
without one hereafter. Edmondson plus
takes a short crawler with him. Saw
his corals set in cement blocks, & many
others, septate stars, sea cucumbers, cones,
corvins, etc. etc. - but collecting thus far.
- especially good close to shore and along
rocky wall.

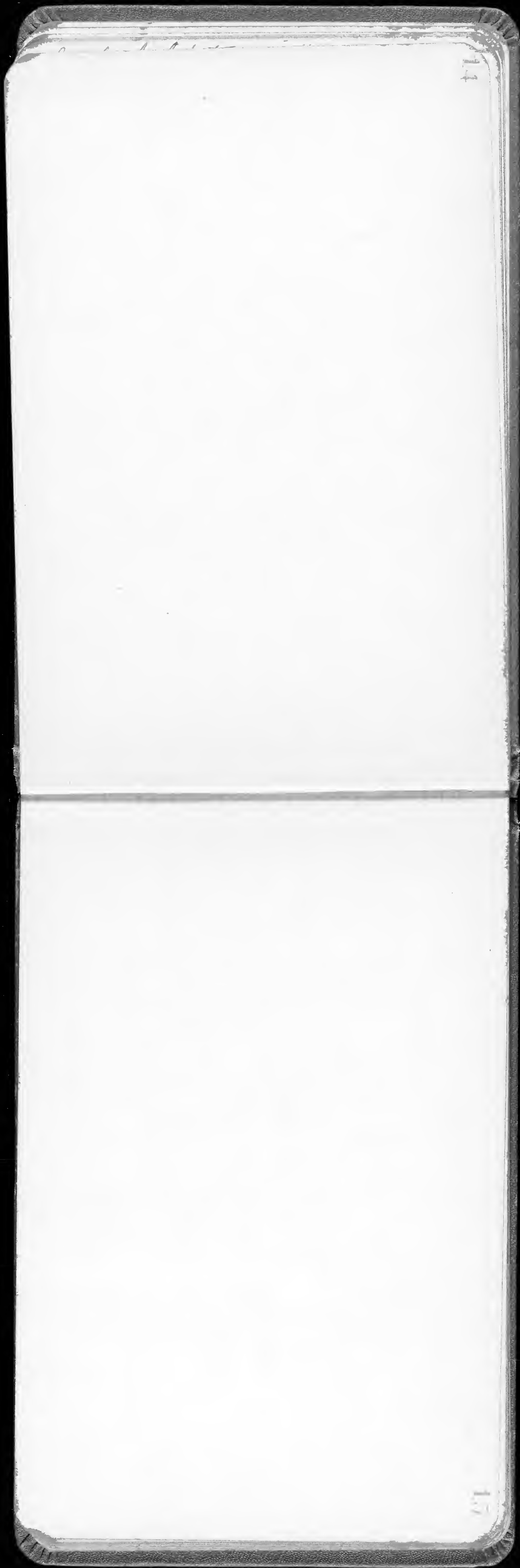
Looked at Ostugaard's collection of
gastropods. He is especially interested
in genus *Gypraea*. (And no wonder!).

Dec. 20.

Trip to western side of Oahu with
Stokes - around southern edge of Waianae(?)
mts. Good collecting along shore from
raised reef - see map.

Eustatic bench well developed, in
one place shows beautiful desert varnish - polished
by coral sands.

Departed for Fiji Dec. 23rd



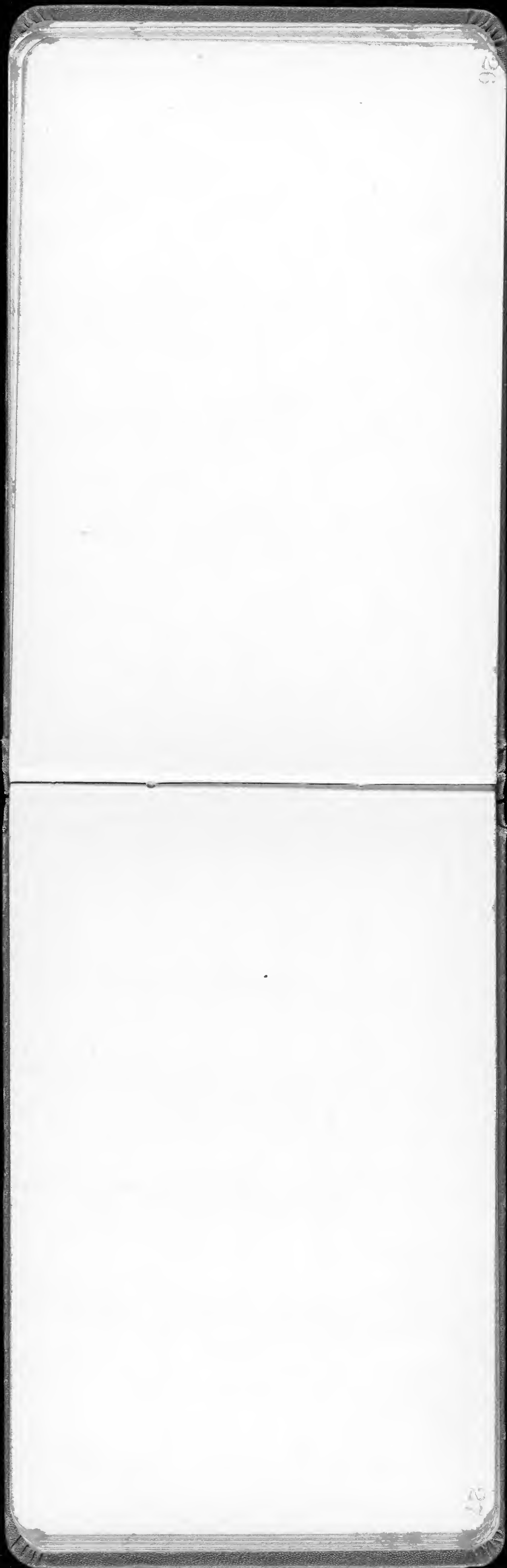
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Lab
II
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Ladd

I

1925



Feb 23rd. Tues.

Arrived Sydney - landed at famous
Circular Quay about 1:30 P. M. To Metropole
& Australia but both were booked well.
Took double room at Hamilton 4/6/6
each & no private bath! (including
breakfast, however). Also took a taxi

Feb 24 - Wed. To Mch 2 (Thurs)

Stayed at Empire Hotel - 8/6 each per
day with breakfast. Tram ride around
town, letters, typing etc

- Mch 3 (Fri.)

To Kinn. Gate - 11 - 10:00 arrived

Misc. Geol. Notes - Sydney, Australia
Feb. - Mar., 1926.

General:

The city of Sydney is located on a tongue of Triassic rock (chiefly sandstone). This tongue borders the eastern coast of N.S.W. for some miles north & south of Sydney and is projected to the northwest. Other outcrops occur in eastern N.S.W. The Triassic divisions as given by C.A. Süssemlch (Intro. to the Geol. N.S.W. - Syd. 1914) are as follows:

Triassic & Tertiary Series	Talbragar Series	
	Artesian	"
	Clarence	" { Upper Clarence - sh., etc. Middle " ss. Lower " ss., sh., coal & cong.
	(Wianamatta Stage	
	Hawkesbury	" { Hawkesbury " Narrabeen "

The rock in & around Sydney is said to belong to the Hawkesbury Stage - consists mainly of massive sandstone & grits (100' at Sydney) - occasional thin beds of shale - occasional beds of carbonaceous shale - often containing plants, fish & fresh water shells. (see p. 159-161.)

Bondi - visited quarry in typical sandstone and upper part suppressed and of great thickness of beds. Süssemlch says sometimes they reach 60' in thickness! The main bedding planes

are regular. The stone is easily worked, light tan in color, & darkens rather uniformly with age. Does not seem to stain & stain as much as our Bedford stone.

La Perouse - Mar. 4th (Thurs).

Good exposure at cutting at end of tram line. 40' ± exposed, coarse ss. with 8-10' of carbonaceous shale included a few feet above the base. The lower few inches of shale contain thin layers of ss. less than 1" in thickness. - good example of gradually changing conditions. Sand gains angularity (not sharply so, however) - cross bedding very well developed. Columnar jointing at top of exposure. Süssemlch explains this as follows: Great dike upraised saturated ss. - corrosion currents heat ss. for some distance & expansion occurs - later contraction & fracturing. Saw no evidence of dike at La Perouse - no fossils seen.

Sandstone beautifully exposed along the coast near La Perouse opposite Barell Id. Here dips are high & cross bedding the rule. Wind & wave have eroded beds into fantastic shapes - ridges, pits, haystacks, washbasins - all are there. Took photo.

Same locality is rich in marine molluscs & other invertebrates (modern). Simple lamellidiscid shells are very numerous; coiled gastropods, 8 & 5 rayed starfish, etc. & dated series of common forms.

Mar. 5th Fri. To Sydney University to meet members of geology dept. & to lecture is hard but

he was not in. Met Dr. Waterhouse
(Economic - 3rd in dept.) Dr. Brown (2nd
in charge - Petrology) Dr. W. Woolnough
(who is no longer connected with Univ.) +
Mr. Osborne (or Osburn - a young chap newly
appointed. Had long talk with Woolnough
who approved my Fiji plans. Recommended
careful working off Sengatoka valley.
He will deliver paper on Fiji + N.S.W. Crds.
before I leave. He has worked a great deal
on N.S.W. Crds. Discussed photography in
evening - put film lock in tea container - make
double film for carrying film + camera -
might obtain 12.50 for plates - use Insul
against this Grand. Water to him.

Dr. David or Prof. Ementer - was in town
not alone.

Woolnough gave me letter to Mr. E.C.
Andrews, Asst. Geologist, Mines Dept. Sydney.
Mr. Dunn is asst. paleontologist (good
routine man but not an enthusiast)
or paleontologist, been done with paleontology
in N.S.W. That of Victoria worked up
letter.

Am to see Waterhouse. W.L. - meet
Prof. Cotton + Waterhouse's brother (Agri. Dept.)
who has lived 2 yrs. on Fiji teaching
them agriculture, etc. - kind of missionary.
(Waterhouse tel. 3916.)

Saw Triassic fish + insect remains
from green shale at Brookvale - quarry
not far from Sydney.

Mr. O'Connell wants H. andesite from
Fiji - will send note.

All members very kind in suggesting
types, etc. Sydney Univ. are not
interested in grounds are poorly cared
for. In to see dept. in detail used.

Mar. 6th Sat.

Hard about train till noon. Changed
st. looking, got permit to land in N.Z., etc.
are now booked on the "St. Ulmaroa"
(which is a 2 one) - very nice liner
arr. N. There is a 1 x 3 class boat - hence
all 30/1st + pay 10/ extra each. She is a
much smaller boat than G.A. liners
+ thus the roughest part of the trip for
them.

Met Kate Downie, Lani + another
corp. in charge of general in the "Lima".
In the P.M. Kate took us across
the bay to the zoological garden at
Turonga Park. The gardens are situated on
the rather steep st. hills rising from
the water at the harbor. The path
to the top winds back + forth across
the hill with the deepened terraces
forming the loops - there are quite two miles
(at least) of each pen - and
lots of bar-lin cages. The entire grounds
are very well laid out + fully well
equipped. Their bar pens are not as
carefully made as those in St. Louis
but on the whole they are fair enough.
The collection of animals + birds, etc. is
large + very interesting, especially in
the cages of brilliantly colored birds.

Back to flat + Dave for tea after which
he + his wife took Mike + me to see
Jim + his wife. Supporting
act. only fair. - Should mention real comedian.
A bit more vague than I then Cyprian.
in State but not too bad as I thought.

Sun. Mar. 7th

Slept late. Official work of several
sorts + went to Australia Museum.

in P.M. for couple of hours. It
is located, a beautiful brown sandstone
building on the east side of Hyde
Park in College St. Their collections
on the whole are complete, well
arranged & well labelled. The arrangement
might be improved in some ways
& in the geological section the lighting
is very poor. Especially attractive
are their anatomical collections (birds etc.),
Australian animals & birds, &
their numerous special exhibits. There
they have a whole case of miscellaneous
forms labelled "Attack & Defence" - here
are armored fish, porcupines, etc. Collection
of "Australasian" marine invertebrates
is very large & well labelled. Among
the Australian animals the giant
kangaroo (a restoration) over 15 tall,
the wombat, fruit bat, kangaroo,
wallaby, etc. are real ones. The

Museum issues a good little
magazine - see copy purchased for 1s.

The museum building was
well patronized the day of my visit.
It was Sunday - museum open from
2-5.

Among the mineral specimens were
a series of casts of famous Australian
nuggets - including the "Welcome Stranger"
weighing over 2,000 oz.

Mon. Mar. 8.

Typed & sent letter to Guyer.

Called upon Mr. E. C. Andrews,
Lecturer in Geology & President of the
of introduction from Dr. H. S. G. Wilson.
Talked with him for an hour. Mentioned
his early paper on Fiji - he regarded
them as juvenile attempts - poor and
repeated. Gave me a copy of his
Proc. Address to Royal Society 11.5.22
Nov 3, 1922 - A Contribution to the

30
Hypothesis of Coral Reef
Formation". Discussed the origin
of reef. He believes in erosion
platform stable through the Pleistocene
in many areas. Believes there is
no Miocene rock in Viti Levu (except
and of Palaeotroch not aware of
difference of opinion among them. Believes
amorphous unbedded ss. of Lau Group
— the Pleistocene which fossiliferous
is an autochthonous bedded rock
— is Tertiary. Would like
to return to Fiji but is too
busy with routine work to do
an excursion. If Palmer & I go
to him he recommends Turakau,
Thuthia (Cicia), Qilazila, Vanua Malakau,
Mago, La Kaba. Which in Fiji
he did little in Viti Levu.

He impresses me as a fairly
capable man but I suspect

that he is not really enthusiastic
about research. Thinks a deal
about his position & the fact that
he does not have a D.S. degree.
Recently exhibited photos of American
geologists (Storoy, Pennington) duly
signed to him. Praised a bit
about my climbing achievements.
Pretended to know quite a bit about
America. As I left he asked
me how long I had had my
degree, etc. I confessed to being
yet a youngster. Said he did not
have degree — I laughingly
remarked that he "didn't need
one now" — he fairly purred!

Dave came for lunch. To
Mineralogical Museum on
Dec 11 in P.M. Beautiful collection
of minerals, minerals, models
of rocks, geological relief maps, etc.

etc. The fossils are very
abundant. The fossils are
in the strata. A large number
of Auchenia have a notice on it
to the effect that it is very marked
as large mass in the interior
are practically. Collections of rock
are few - Of Ordovician only
graptolite - or silvery carbon films.

Collection of fossils & opalized
material are beautiful - some
wonderful opalized fossils - most
of them from Victoria.

Met Mr. Lawrence on street.
He came over in evening for
lunch.

Wrote long letter to Pop - chiefly
about expenses. To bed for 3 hrs.
sleep.

Four March 9

Off at 5:30 & to Belmore

By 11 - bus drove us about
Sublime & then headed south to
Buller. Beautiful view from
"Sublime Point" - 1000 - to 1400' above
sea - show rock walls for hundreds
of feet - long train puff through
miniature village & black specks
in white surf are farther - carrying
brown beach, white surf. Blue
water & red roofs of hundreds
of houses.

For a plunge in surf &
dinner in Buller. Shock inland
& returned through Campbellville, etc.
Atmosphere hazy due to bush
fires. Every thing very dry. The
country is peculiar - open forest
of short & scrubby trees - little
real bush - all seem to have
burned at some time
other. Leave for supper &
home to pack.

Wed. March 10.

10

Left Sydney, about 8:30 a.m. & left
at 9:00 a.m. for the Blue Mountains. The
route is the great for hours
but a little north of west. Our
destination today was the
Tourist town of Katoomba, which
we reached shortly after noon.

The drive thus far has
not been at all unusual from
a scenic point of view. Most
of the hills are low and
gentle. Instant view obscured
by smoke from countless
brick fires of all sizes. Real
fair - day clear & rather warm.

Stopped for "morning tea"
enroute at 11:22 a.m.

On a beautiful blue & white
holding 20 passengers in comfort.
Two jolly, gossiping tourist
females behind us & a
female man with a poodle
dog on one's right (poor imperfect
thing!)

Took quarters at the "Springhill"
@ 10s each per day (Am. plan). Food
only for. Around town & out to
see scenery in P.M.

Beautiful valleys have been
carved in the high plateau
on which the town is built.
Some of these valleys are fully
1000 feet deep - hundreds of
feet of sheer rock exposed
above the wooded talus
slopes. Pinnacles & isolated
chimneys add to the beauty
of some of the cliffs.

They call this area the
"Blue Mountains" - Blue Valley
would be a more appropriate
name. The blueness at the
present time is due chiefly to
smoke from bush fires.

Rock near Katoomba is
chiefly coarse ss. with ferruginous
seams. ss is wht or tan - some
red-brown. There are some
beds of conglomerate containing
pebbles of clear, milky, & smoky
quartz. Locally cong. also is
cemented by iron oxide. ss & cong.
beds are probably Triassic. Older
rocks may be exposed in
deep valley bottoms.

Passes much Triassic(?) shale
enroute from Sydney to Katoomba.
Letter to CKU, note, etc.
Thurs Mar 11.

With Mike over most of the
ground I traversed alone yesterday.
Back to hotel & checked out.

On bus at 11³⁰ for Durian
Cave. Dinner at noon at Blackheath.
More of the same type of
scenery as last seen about
Katoomba. 1200' valley with
vertical cliffs above & steep wooded
slopes below. Woods fairly
open due partially to bush fire
at fairly regular intervals. Several
species of gum trees make up most
of the forest - There are sometimes large
& white trunks (black feet off).

Highest point on road is Blue

Mt. at 4,200' above sea (highest

mt. is 4,800'. The

route taken by car is said to

be a good one - mts. around

in 1813 & 1860 made shortly

after. Stopped at various "mounts" ±
which are really high peaks on
the general plateau land - some
followed by small - finally
descended - some were
climb - some were 10 (7).
Finally by steep winding road we
drove 1500 - 5 miles - arrived
at cave & entered beautiful cavern
held with all comforts of such
place - including high tariff!
Cave. Though arch was ahead
Letter to Kay Marshall.

Fri. March 12.

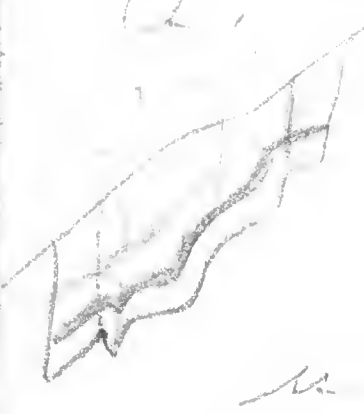
Early morning walk to "Carlotta
Arch" - found Sil fossil slabs, etc.
Pictures & walk after breakfast
to "Linda's Coach House", etc.

Through "Oreut" cave in
the P.M. Trip took a little over
2 hours. The cave entirely beyond

my power of description! It is
a newly discovered cavern - fresh
& amazing. The lighting effects
add greatly to the cave. Light &
cement walls & stone walls are
to treasure it in good clothes,
I feel efficient, not least mental
& quite intelligent.

Caves of Oreut proper are not
large, but are tortuous with many
steep ascents. On the whole the
cave floor seem to bear little
relation to the bedding planes of
the highly tilted ls. The cave
is interesting chiefly for the
abundance, delicacy, & color of
its depositional features. In
many "rooms" say little cave
look a cypress. Stalagmites,
stalactites, shafts & pillars are present
in unusual variety. In addition

the beautiful shoulder
of argonite stone with stone
of color. It is bifurcated edge



These are very thin
& thrown into folds.
Another unusual feature
is the so-called "mystery
figure" - curved ^{or straight} projection sticking
out at all angles from stalactite.
Often the perfect at first is curved
in a horizontal plane - even
forming a figure 8! The
main part the same diameter
a bit smaller slightly - they are
circular in cross section. Your
quack tells you that they have
stamped everybody & uses
a mixture of big words - hydrostatic
pressure, crytalligraphy, etc. & cryogen
you "oo-o!"

At first I considered them
rain fillings left by solution of
surrounding rock (may suggest
quite occur in roof ls. of main
arch) - then resorted to fresh
crytallization - which undoubtedly
will explain them satisfactorily.



(see ahead - notes for
Mch. 14)

In evening, ^{danced (once)} played bridge
with Mr. Watson (who with his
wife came at our table) & Mr.
E. L. Savage of Adelaide. The
last named I very like of
Watson & mine.

Sat. Mch. 13.

Up just in time for
breakfast. Through Lucas cave
- large - much bare rock
& fallen blocks - broken columns, etc.

Constant "How cast your eye to
to the --- This is what we
call ---" gets my goat!
Beautiful buccina exposed in
one roof at one point.

Through "Left Imperial"
Cath. in P.M. - beautiful
view but lacking the freshness
of the Orient. - quiet society
& splendid coloration in tones
of white, gray, brown, & red. Good
light, certainly good in showing
up the colors! Saw a spotted
squirrel - a fine pattern which
had been faded a bit but there
seems to be very little of the
& then only in the older caves.
Abundant Halysites in reef at
one or two points. Some of
a spotted material has broken
down in air & become soft

- some in flakey (quartzite become
latter is strontium carbonate).

Budge before & after supper &
a glance.

Sun. March 14

Early morning, climb to hill
top for picture. 2 of well known subd
are quite tame everywhere about
Cedar House - very like like
chipmunks of Long Park.

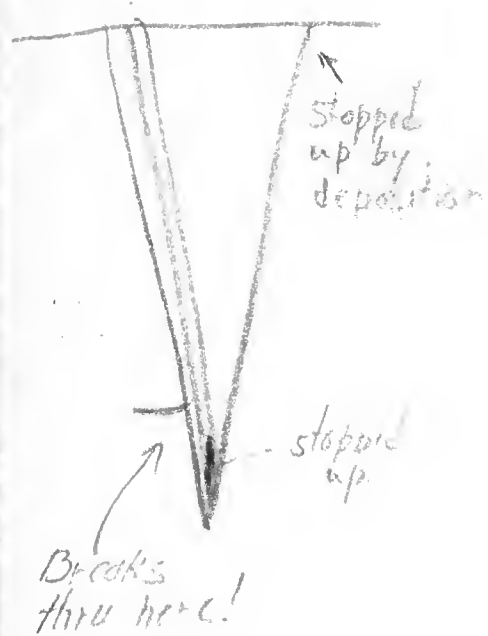
Also took pictures of fluting
in ls. - These are very well developed
on hill top. Channels up to inch ±
in width & go deep half or deep.
Intervening ridges very sharp. They
are undoubtedly due to solution
by almost pure rain water. They
never appear on flat or vertical
rocks but on exposed faces
at 45° ±. - cf. fluted cliffs of
Cork!

Talk with ancient road guide,
the "Whymble". But I had
introduced myself before - a
very intelligent fellow with good
knowledge of geology, but a
real tunnel in the subject.
Saw with him a bit of
andesite (?) intruding, some which
has been metamorphosed to
a mica schist (?) near the
contact. Intrusion seems // to
be well felt.

Many fossils - *Stromatopora*,
Parasites, *Halysites*, *crinoids*,
trilobites, etc.

His theories regarding the
origin of the "mystery figures" are
interesting. He rightly lays them
to peculiar crystallization
- his favorite is a peculiar

a faulty modification - as follows.



A then normal stalactite
form - bottom sealed by
deposition - sides built
out to form broad based
pendant - side openings
closed (against pressure!)
+ water bursts through

wall of stalactite to give figure
a right B - later curved due
to peculiar deposition (which
alone could explain the whole
thing?). He could not see
my argument that the water
(as the pressure rose) would first
break through base of stalactite
so recently sealed!

By car back to Sydney
+ into Kinnel Flat again. Good
valley scenery, + Echo Pt, etc
near Katoomba.

Mon. March 15.

35

Excursion about town 10 A.M.
& leaving in P.M. Mr. & Mrs. Surge
& Mr. & Mrs. Watson here in evening
for cars.

Tues. March 16.

To Belmore early & met Dan
Dorome who drove me north to
Iron Tite Company's plant at Enfield.
The works are located on the
right bank of the Cooks River
~~just~~ south of main part of town.
Spent the entire morning with
the manager Mr. J. Knowles
had lunch with him. Also met
one of company owners, Mr. K, etc.
Mr. K. is much interested in
his work, knows some geology
& seems very capable. Plant is

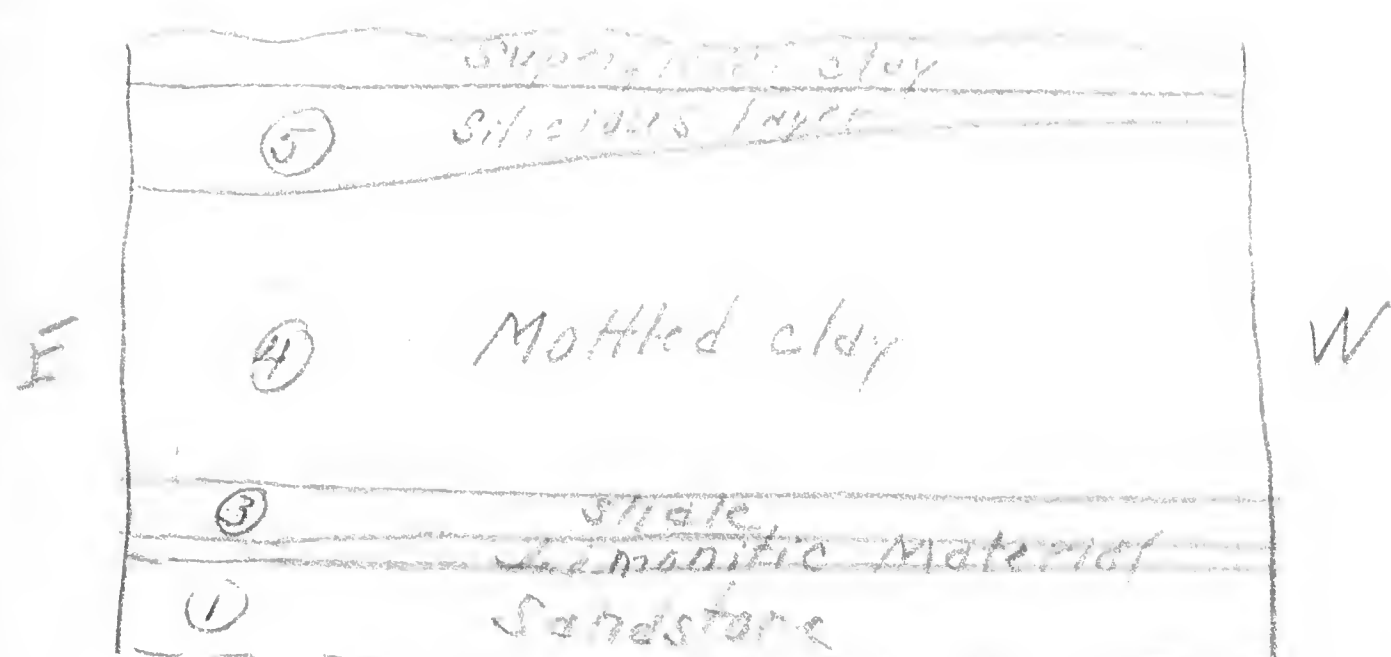
old fashioned but seems to be
operated well.

The pit exposes about 20'
of material. It is roughly cut in
outline & quite large. (Plant has
been in operation about 9 years).

The main floor of the pit
is composed of ^③Chocolate, gritty, well
bedded shale which contains
abundant plant remains in the
form of carbon impressions (at least
one fish has been found here). Locally
this shale is colored brown by iron.

Underlying the shale is a 4"
band of somewhat material &
below this is ss ^① The latter is
exposed for 2' & Mr. K. says
he has drilled into several feet
more. The ss. is soft & friable
composed of white, yellow & red grains
with occasional flakes of muscovite ^②

Quartz fine & angular - fairly well bedded.



Sketch of portion of pit wall - Vert. scale 1 sq. = 2'

Alum. shale in main body of mottled clay which is arenaceous, ferruginous, & contains few muscovite flakes. Mottled color (pink, gray, red brown) due to iron, which however is not present in sufficient quantity to color an entire burn properly. Some 10-15' of this are exposed. At the top is a hard siliceous layer, thin at the

west end, thicker at the east, this layer is quite resistant.

Alum. in superficial clay bearing some pebbles of iron ore.

No fossils were seen except in the chert shale. Locally the main body of clay is well bedded & contains considerable mica.

The outstanding characteristic of the entire exposure is its nonability, (when compared to Paleozoic sea deposits).

The management is having difficulties. It mixes 10% of the superficial clay with the mottled stuff (to give it color). This does not give it enough for the entire burn. In the lower draft below the lower tile are too light in color & if the lower then properly the upper ones are too dark - hence the lower ones have to be burned

2. second turn - placing them
on top of the second burn. If he
mixes too much of the colored
clay in the bricks - if he
mixes too much of the hard siliceous
stuff they do not shrink properly
& are too porous. What he needs
is a coloring clay for his lower
turn of tile in each burn.
etc etc etc.

Plant.

Clay blasted, hand loaded into
barrow & wheeled to car - hauled
out of pit on cable & dumped into
a hopper - crushed in revolving circular
bin under two large whale - sifter
through floor of bin & is automatically
hauled aloft & saved (coarse stuff
returning to crusher). Fed into
cylindrical mixer & squeezed out
in parallel plates - then wire cut

to proper lengths & unmade
by hand. One block at a time
is fed to revolving press (each
press contains several dies) & stamped
wet tile is removed by hand on a
wooden rock. These stacked &
dried by hot air from kiln. Then
scrapped with knife & burnish.

Only colored tiles are glazed.

Net waste is about 14%
when it should be about 9%.

This due chiefly to difficulties with
clay and down draft kiln. Demand
for roofing tiles has exceeded supply
& competition is not keen hence
the company can still operate at
a profit but not indefinitely.

Went to Kinsale, Victoria State
with Mr. W. H. H. to visit the
Savages in the "Gulgo" (Camel)
Prison - "American Waffles"

Wed. Feb. 17.

32

To Sydney University early AM
Met Carter & some who showed
us about & took us to lunch.
Buildings are beautiful with
high arched ceilings, stained
glass windows & carved ss.
Climbed to top of main tower
visited beautiful library & Great
Hall. Cotton, Waterhouse, Osborne,
Miss Brown & Miss _____, Mike
& I arranged to meet Mr. Dunn
share talk. To Mining Museum
balance of afternoon with Curator
(a great mineralogist) Mr. Card.
Obtained good material.

Mr. & Mrs. Watson here for
supper - to see "White Cargo" & attend
Mr. Leon Gordon, author, has
the leading part - a splendid

play though the theme was rather
sordid.

Thurs. Feb. 18

Trip to Long Reef with
Mr. G.D. Osorne (see monograph
cuttings) Good day - a fine
place for photographic studies
in marine erosion.

To Sydney Hotel for dinner
and met Mr. & Mrs. Watson.

Fri. Feb. 19

Met Tim on creek in AM.
Remained in afternoon. Watson
called in evening & took us to
Johns Bay - lovely scenery, however
we had no boat and they
were away.

Sat. Feb. 20

Left about 10:30 for Sydney.

33

"Ketchikan on T.S. & Almarosa" (of
 Lumber (Ketchikan). Winters, Sargeant,
 & Osborne at wharf to see us off
 with small steamer & local
 vessels. Almarosa is small steamer
 but has good accommodation. We
 are comfortably situated in a
 2 berth billy cabin.

5. *Trichostema* - worked a specimen and
 after the 10. May in J. M. Water-pick and to
 some extent but almost & had extra
 Sec. Mich. 21

Calvin - up early - worked till
1030 on pictures etc - all up to date
now. Type to Chas.

begin

Turn 11. 23.

63
Sat. Feb. 25th. - to supper
dinner 11.30

Lunch 2.30 - morning for
us later. Found flat on upper
Symonds St for 35/ per week.
More - - - - -
- - - - - Early to bed.

Sat. Feb. 26th

Rainy & dull all day. Home
10 AM. - Typing, etc. Rec. cable
from C.H. - all well at home.

To King's wharf & wharf
Schooner "France" of Whitney South
Sea Expedition. Mr. Bick met on
board but met Mr. Carey (?) a
Portuguese collector. Later met Mr. Bick
& had chat. Mr. Bick later Home
to good supper. Typing, etc. in eve.

Sat. Feb. 27th

To call on Mr. Vardaman,
Head Lecturer of Dept. of Geology
at University. We presented our
letter of introduction from Prof.
Cotton. Mr. Vardaman offered to
take us to lava cave on Mon.
& will have us out to home, etc.

To Southland Museum in
P.M. Mr. Drake is now Curator
and Mr. Chapman Lect. Mr.
Chapman is not quite better
yet in at time of my visit.
Museum has wonderful collection
of all over world - a large
room some 80' long & 7
wide, with various small
stone implements, etc. The
interesting collection is a very
fine set of bones from some
cave & polished. Good museum
in all respects, good collection.

The most of the slope was not
 seen. The one side of the
 great of about 100 ft. to the
 summit was still to be seen a path
 - it is the first path? Some
 small masses of granite were high
 side - 200 ft. by following further
 out. groups of boulders in fissures
 into the rock. The rock is not
 near at - few small boulders
 (one in ^{remnant} area high boulders)
 the complete - granite not too rough -
 slabs were accommodated themselves.

To the summit - good path - almost
 in some water - less than
 showing a surface with patches
 of rough slope where called
 surface boulders - sparse vegetation
 vegetation. Practically all floor
 (which would steep slope of cone as
 needed - bare black ash,

red ash cones, etc. appear &
 slope are of loose rock. Bedding
 none. Descended into crater
 after taking pictures. To low
 ash beds are seen in places, much
 red & black scoria, one large
 filled with bombs (see specimen)
 Little vegetation but much slumping
 has occurred.



Got up to see lava "tubes"
 but as we were in light or with
 we saw only entrance. There were
 tubes representing old lava flows
 roof hardened & liquid beneath
 floor on - very rough. Saw
 one place where lava seems to
 have flowed over 20' diff - from
 tradition shown

Collected in craters, not seen
in crater - black flow lava from
flat sloping slope.

Mon. Mar. 29

Traveled to the south in my
touring car. Found a very
good road from Suva
- road straight through the
lowland jungle & forest. Last
letter which came to me at
Mr. Bartman at the University.
But the way to Dr.
Scott's home where we were
conducted through lava caves.
The entrance is a hole in the
ground. The caves are tube
like with rough walls.

Several of the lava flows
Rough structure, white, etc. developed
In places floor is covered
when a second flow broke
through & solidified in place.
These caves probably extend for
nearly 3/4 of a mile. The lava
came originally from the cone
now known as "One tree hill".

Home in evening.

Tues. Mar. 30

To museum for about time
in A. M. - about 10:00
afternoon trying to get a
lookings, etc.

To Bartman's for supper
in evening. Mr. J. J. J. J.
of Geology also attended. Met
Mr. K. who is very pleasant.
Like Bartman a bit better though
he still appears a bit old & tired.

Home at midnight
Wed. March 2nd

Spent morning with
Lester, visiting west
vicinity of Wilford & Crystal
Spr. Saw beautiful light
conglomerate faulting in shaly
sandy base of Waerrata form.
Thrusts etc. are most intricate
& according to B. are not due
directly to vulcanism.

To museum in P.M. &
home to work till 9:30

Thurs. April 1st.

To museum where Mr.
Luffer introduced me to
new curator Mr. Archie, a
very pleasant young man who
gladly agreed to give me space
in which to prepare my

just Mr. Luffer gave me a
note to Mr. Munro of the
flea market. He took all sold
out but scruffy stuff & no
treasures in all Mon. (& I
leave Tue for Helena). Explanation
given - prolonged Easter celebration
here - all shops close for several
days!

Met Mr. A. H. S. Powell at
his home. Mr. Powell is a
commercial artist by profession &
an A.I. systematic collector
of the west. Beautiful & complete
collection of modern molluscs
of all sorts. Also some Tertiary
fossils. Presented me with
crabs. & papers & promised
a big series of modern genotypes.
Will be glad to identify or
check any or all of my

Figian medium stuff. I shall
see him duplicate. He
is evidently a very careful
& conscientious worker & I am
much impressed. His
drawings of specimens are
excellent. Also he has done a
lot of landscape painting.
Wrote Paleocene fossils.
Home in evening - wrote etc
Fri. April 2.

Worked at home till noon.
To Melford opposite Rangitoto
on boat coast in P.M. Collected
all afternoon. Got series of
gastropods, bryozoans, no
brachiopods looked in strange way
they were found under exactly
similar conditions - due to Rangitoto
few corals, no Ophiuroids, sponges
etc. Worked at home in eve.

Sat. Apr 3rd

To Zoo in A.M. - met
Curator, Mr. Griffin, who showed
me through. Saw you here in
see that 3 yrs old but still
remarkably good & will form
program for future development.
Mr. Griffin has recently returned
from a trip to Africa, bringing
home a fine collection of animals.
Saw well laid out & gave for
study (if suitable & I'd like them)
Palm room got excellent. Saw
last of day. The penguins in
a very nice state.

Worked at home till late
after supper.

Sun. Apr 4.

Worked mostly to cement of
M.H. Eden and Mr. This is a

2
The car is situated in
a room, after a long interval
of 1000, 1000, 1000, to the
amount of 1000, 1000, 1000,
and a large number of
other 1000-2000, etc. Outlets
of steam & hot water to top.
Picture.

There is a lot of 1000, 1000, 1000,
on these etc.
Then April 5th

To Museum & post market
but no work in library.
Till continue. Long talk with
Mr. Beck of Finance in P.M.
My first impression of the much
discreet gentleman are very favorable.
Spent rest of day & evening in
packing, etc. Late to bed.
Tues. April 6th

Packed specimens, etc. &

It is a very good
unsuccessful trip on a rotten
train till after dark. (due is about
5:30, but we are here a bit late).
Train dirty, dusty & filled with
squealing babies, etc. Many stops for
tea & refreshment. Broken spring
on 2nd engine also delayed us.

To Hamilton House for good
accommodation - 95 cents per day
including tariff. To see "San
Horse" - a fine picture & about 1000.
A street car (no. 1000) looks like
a "the latest American orange" &
a many-90-5000 goes under the
name of "unsuccessful".

Wed. April 7th.

Up to the 1000, 1000, 1000,
and I enjoyed it very much.
Home day & night 1000, 1000,
1000, 1000, 1000, 1000, 1000,
all night to show of Lake.

to be by (between) Whaka puru

and the Govt. Forest Reserve
visiting a number of Maori villages
visiting their cooking oven, stone
vents & in natural hot water.

An old Maori village below where
the main trail was has been
turned into an orchard. Here we
saw a number of interesting carvings,
& other Maori work.

After late luncheon we walked
about town, visited the stone
sanctuary grounds, bath house,
etc.

In evening we attended a
Maori entertainment & were much
amused by the "Haka" & many
other dances & songs (see program).

Wrote long letter to folks & went
into to bed.

Thurs. April 8th.

Went at 930 on the

Sw-touring bus. Leaving in
town of Rotoma at the southeastern
Tip of L. Rotoma. (No. 1 of 6 lakes)
the motor took to road past
Whakapu & the Govt. Forest Reserve
around the southern tip of the lake
& northward along the eastern shore.
Had a view of Mokai Id. in
L. Rotoman - our guide stated that
this is not a Sister. Reaching
eastward near the north end of
the lake we stopped at Tikitere (hot
springs). There is an interesting
Rua near the Whakapu. Some
were the character of the place.
There. Looked down the lake
towards the north, etc. & beyond
expressed to the Maori
Bazaar. Visited the place & stopped
into one of the hot pools. Leaving
dropped up only her Tiki which

From the west of the river
at Tikitere, hot waterfalls,
etc.

Went from Tikitere to shore
of Lake Rotokake (area 1 & 2) part
over the shore, here of
black water in To Lamour
Honeycomb and Lake through
the forest, where there is
great low fern, etc. To Lake
Rotokake (3), a better lake, - a
beautiful lake. Stopped at Hot
Springs for a taste of its
clear vile water. To Lake Rotomahana,
a better lake. Here we had
lunch.

Returning through Honeycomb
we take a path trying to see
Lake Katara, a beautiful body
of water with low forest of

L. Rotokake & north of Lake Katara
To Lake Katara we went
through a series of magnificent
lakes - part a small crater lake, etc.

Back to main road &
return to Tikitere & my old road
to Lake Rotokake, a
crater lake.

Back to Rotomahana by same
route arriving about 4:30

Put a package in the "Bullock"
& ready to go
Pre April 9th

Took same "Bullock" to
Lake of Titicaca. Left
Rotomahana at about 10:00 AM.
& went SE. road. Saw a
lot of water. The "Bullock" government
from New Zealand. The lake is
a series of small lakes. To Wairoa (part Blue [Tikitere] &
Lake of Titicaca. Green [Rotokake] -

Boasted branch & crossed Lake T.
going due east & turning south there
narrow passage & across southern

bay. Site of smaller buried
village here. Good view of
Tarawera & its cleft, side
craters etc.

A short walk brings us to north shore of L. Rotomahana which is crossed by tarmac going south & southwest. Splendid view of Tarawera, crater, small crater along edge of lake, hot sand topography, steaming cliff, etc. New cliff crater is boiling.

Succed went on foot up valley
to site of what was at one time
the world's largest geyser, Waimangu.
Walk up is 2-2½ miles - many
boiling springs, steaming vents etc.
The site of Waimangu is now a
great blue lake in a deep pit open
in the side toward what
was formerly "Frying Pan Flat".

Later in evening (like with ²
some notes to write.

To get account from house
- now unroofed & in ruins.

15. 1 to Pithia by motor - All
sorts of notes. Trenches. Noted
a well in some distance
away. - just low down
at the foot of the Trenches
eruption. Below by 3352 ft.

To Ohinemutu north of Rotorua
- Maori village where photographs
are not allowed, looking over stream
cater, etc. Found well beautiful
carrage & in yard. Steam
jet between 2 grasses!

To mud pits & hot springs
& mud volcanoes nearby

To "Hutchess" in eve.

Sat April 10

By train to Auckland.

Leaving Rotorua at 9.30. Sat 11.
Mt. Royal aft. Work. Mag.
paper, etc. for balance of day.

Sun April 11.

Work at home all day.

Mon April 12.

Amang. Looking on Amang
etc. & put balance of day packing
specimens, working on Mag. paper
etc. Budge with Miss Pennell &
Mr. Hutton in eve & packing
later.

Tues April 13.

Had morning about 10.00
to sailing. Saw Budge for
a few moments & took photo
about 10.00. Sailed about 5.00 PM
from Lower Wharf on Amang.
Budge on eve with Pennell
& a Miss Selby.

1885
Sept 14 - Typo letter to
Hill, sent from breakfast. He
sent me a very interesting
letter up to 10:30. He is an
amateur. The letter is
sent. But in the afternoon
I have busy

Thurs. Sept 15

Sept 6th & Typo letter to Dean, etc.
before breakfast. Letter to Typo, Hill,
& Seaton & Hamill during day. Also
read "Oh, Money, Money!" (Baker) &
enjoyed it some. Mike slept most
of day, but was up for supper
& all evening.

x Ray News. To bring order of
Council from Hendon on new
south side of Avenue

x Book letter - "Songs of a Sentimental
Blake" by C. J. Dennis - Cornstalk
sent to Harold Plummer & me.

Fri. Sept 16

Sept 6th or used letter to
Hill, etc. before breakfast. Am giving
a letter of intro (to father) to Mr.
x J. J. Wilson who is from Wellman
- going to Toronto to work. He called
Sunday for week end & Bruce.
(Much business) etc.

(See P.M.H. II)
p. 9

SIVA TO VANCOUVER

Fri. Sept. 3rd

Sailed about 3 pm on RMS
"Mayana". Sea calm, good
weather. Long talk with
Hoffman in evening.

Sat. Sept 4th

Could not time to see still
have Sept 3rd today. (Hill)

in college at night. Present
session for the first time
and I? I am
Hoff & have my book
on it - with the
second edition - the 1st &
Hoff's only one in room,
and must examine

Sat. Sept. 5th
I am not really dead
yet - but when I
return home - I will
tell Hoff

Sun. Sept. 6th
I am not really dead,
but when I return
home - I will tell
Hoff. I am not really
dead - but when I
return home - I will
tell Hoff. I am not
really dead - but when
I return home - I will
tell Hoff.

Monday Sept. 6th
I am not really dead,
but when I return
home - I will tell
Hoff. I am not really
dead - but when
I return home - I will
tell Hoff.

Tues. Sept. 7th
I am not really dead,
but when I return
home - I will tell
Hoff. I am not really
dead - but when
I return home - I will
tell Hoff.

Wed. Sept. 7th
I am not really dead,
but when I return
home - I will tell
Hoff. I am not really
dead - but when
I return home - I will
tell Hoff.

Mon. Sept 8th

30

Sept 9th. I have
of my own. Haggard, Burge
in morning. I will write Haggard
+ Burge. I will write Haggard

Thurs Sept 9th

Sept 10th. I have
first. I have report + studied
Sept 10th. I have

Sept 11th

Sept 12th. I have
Abstract - great success

Gregory + I, F. Illingworth
at dock. Came B. M. stuff
+ Gregory down. Hoff + I to
Museum for conference. I
like Gregory. Talk talk
with C. M. L. I determined
shape what pleased him
then, talk with Gregory

about my work - a very
satisfactory talk. I have
prepared summary, etc. I have
been O.K. on my paper. I
report of progress at G. S. A.
The World. Hoff + I had
paper on bench. I have not
think much of glass.
They for origin of land.
Need but strong interpretation
of origin. Progress report
to appear in abstract
in G. S. A. J. 100 - Hoff + I
will to be given with
Then sent to G. S. A.
for publication in G. S. A.
J. 100. I have of Hoff + I
to M. L. I. They will
all get my report to B. M.
+ later I will have of Hoff
to send. Wash D.C.

31

most serious & of hope
to turn in money mass.
by Jan 1st 1928. Give
me \$500 cash, promised to
pay all freight bills &
shipping of 'tall' but least
up to \$100 for photos.

W. J. can't be bothered with
it. Will consider Wright
collector just as he
wrote me so as to be
communicative with Wright
Burr - will keep collection
but temporarily.

Talked as though my
stomach the part of world
is a certainty. I mentioned
New Siberia plan - C. L.

Or report has been
land and during Pleistocene
or compared with land

and on the other side
Probably more near than
then - hence no land
budget for Pleistocene man
to walk over!

Supposed to be a
recent workshop on the

Talk with Slaves about
skull - both skulls probably
modern - note shared by
not (not merged) - in
conjunction - evolution? -
study marine - large gutted
fragment, beautiful - full
of bones. Also have some
OK popular article - Skull
is Accur. # 8 to

To turn walk (Bosny
of deer 3000 - 11 May 1928
to turn go to see some more
P.O., land, etc. finally
ending up at dinner.

of Hawaii - Brown may
be here tomorrow
for your work. May
return via Iliamna. I
don't see it. I don't have
anything to contribute on
the Ind. paper - so he
thinks.

Met Brown temporary
successor - Mr. Freeman &
leave us to ship.

Stebble Campbell, Guy
& Denny, to see us off.
- photo for paper - & good
bye to Hawaii - temporarily
Till with Hoffmann
on morning

Sat Sept. 11

Work & talk until Hoff
all morning. Talk with

of Brown. Brown leaves
page fight on morning.

Sun Sept. 12th

Studied and wrote, etc.
With Brown, day of day &
evening. With Brown, morning
with Brown, day & evening
with Brown, day & evening.

Mon Sept. 13

Studied some but not
much of day. Work & talk
with Brown.

Tue Sept. 14

Studied some but not
much of day. Work & talk
with Brown. Work & talk
with Brown.

Wed Sept. 15

Sept 10th. Started
on road between
Vancouver & Seattle

Thurs Sept 10th

Went to the river in morning. Shot
some small birds. Saw many
young - some had eggs - 2
shot. Saw many & shot 2 pieces
of living fur. Also killed 1
in boat to sleep.

After the evening from
Miles.

Fri Sept 11th

Went in Vancouver - left at
9:30 AM on 2nd section of
train. Saw many day birds
with Symonds, George & Mrs
Small.

Spent day sleeping. At
last not connect with Boat
Sent over to Miles Deal.

Sat Sept 12th

Through into night slept
until morning (in position
2 AM - 4 AM) & shot 200
I believe.

Sun Sept 13th

Road most of day. Let
getting sick. Went over
at 10:5 - 1st night. Went
midnight. Saw many birds
in morning. By 2 AM
saw many birds. By 11 AM
saw many birds. By 11 AM
saw many birds.

Mon Sept 14th

Went to the river. Saw many
birds. Went to the river.

late & missed O.R. I
connection. To hold for
night with Young &
Symonds. Lodged
for \$5.00

Tue. Sept. 21st

Took 7¹⁰_{am} R.I. for
Cuba R.R.

Oct 10 1897

100

